REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed January 7, 2009. Claims 1, 3-5, 8-11, and 13-14 remain pending in the present application. Reconsideration and allowance of the application and pending claims are respectfully requested.

1. Indication of Allowable Subject Matter

Applicant acknowledges the Examiner's statement in the outstanding Office Action in which claim 6 has been indicated as being allowable if rewritten to include all of the limitations of the base claim and any intervening claims. In that it is believed that every rejection and objection has been overcome in the present response, it is respectfully submitted that each of the claims that remains in the case is presently in condition for allowance.

2. Response to Rejections of Claims under 35 U.S.C. §102

Claims 1, 3-5, 8-11, and 13-14 have been rejected under 35 U.S.C. §102(b) as being anticipated by *Perlin* (U.S. Patent No. 6,285,380). Applicants respectfully traverse this rejection.

It is axiomatic that "[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983). Therefore, every claimed feature of the claimed subject matter must be represented in the applied reference to constitute a proper rejection under 35 U.S.C. §102(b). In the present case, not every feature of the claimed subject matter is represented in the *Perlin* reference.

a. Claims 1-5 and 8

Independent claim 1 has been amended to include the features of allowable claim 6. Accordingly, independent claim 1 and dependent claims 3-5 and 8 are allowable over the cited art. Claim 6 is canceled without prejudice, waiver, or disclaimer, and therefore, the rejection to the claim is rendered moot.

b. Claim 9

As provided in independent claim 9, Applicants claim:

> A method of simulating activities of a plurality of creatures, the method comprising utilizing at least two modes of simulation:
>
> a first mode arranged to simulate the activities of all of said creatures; and
>
> a second mode arranged to simulate an activity of at least one of said creatures at a more detailed computational level of complexity than said first mode, wherein a model of a creature simulated in both modes of simulation comprises at least two portions:
>
> ***a first portion which contains functions arranged for use in both of said modes of simulation; and***
>
> ***a second portion comprising two alternative versions, a first version for use in said first mode of simulation, and a second version for use in the second mode when selected for closer inspection of the at least one creature being simulated***.

(Emphasis added).

Applicants respectfully submit that independent claim 9 is allowable for at least the reason that *Perlin* does not disclose, teach, or suggest at least "a first portion which contains functions arranged for use in both of said modes of simulation; and a second portion comprising two alternative versions, a first version for use in said first mode of simulation, and a second version for use in the second mode when selected for closer inspection of the at least one creature being simulated," as emphasized above.

Rather, *Perlin* describes a system for the creation of real-time, behavior-based animated actors. The system includes two subsystems: an Animated Engine and a Behavior Engine. In the system, "All communication between participant processes is done by continually sending and receiving programs around the network. . . . In an exemplary embodiment, each actor maintains a complete copy of the blackboard information for all actors. If an actor's behavior state changes between the beginning

and end of a time step, the changes are routed to all other actors. . . . In an exemplary embodiment, the Behavior Engine and the Animation Engine for an actor can be split across a WAN. The Behavior and Animation Engines can communicate with each other through the blackboard. For the DOFs produced by the Animation Engine, the blackboard is allowed to contain different values at each LAN. For the states produced by the Behavior Engine, the actor maintains a single global blackboard." Col. 15, lines 34-67.

"Computationally, the Behavior Engine for each actor runs at only a single LAN, whereas the Animation Engine runs at each LAN. When two characters must physically coordinate with each other, they use the local versions of their DOFs. In this way, an actor is always in a single Behavioral State everywhere on the WAN, even though at each LAN he might appear to be in a slightly different position. In a sense, the actor has one mind, but multiple bodies." Col. 16, lines 1-8.

Accordingly, *Perlin* describes that actions of an actor on different LANs may not be completely in sync with one another, since each LAN has its own Animation Engine performing the actions. The Animation Engines are all at the same level of complexity in *Perlin* and are not used based on complexities of simulation. As such, *Perlin* does not disclose different levels of complexities of simulation where a second portion of a model uses a first version for use in one level of complexity of simulation and a second version for use in another level of complexity of simulation. Rather, *Perlin* discloses that implementation of the same action by two different Animation Engines may not be performed exactly the same, although they are at the same complexity level.

As a result, *Perlin* fails to teach or suggest "a first portion which contains functions arranged for use in both of said modes of simulation; and a second portion comprising two alternative versions, a first version for use in said first mode of simulation, and a second version for use in the second mode [being at a more detailed computational level of complexity than said first mode] when selected for closer inspection of the at least one creature being simulated," as recited in claim 9.

For at least these reasons, *Perlin* does not teach or suggest all of the features of claim 9, and the rejection of claim 9 should be withdrawn.

d. Claim 10

As provided in independent claim 10, Applicants claim:

> A method of simulating a process at two different levels of complexity, the method comprising:
> utilizing a model that comprises at least two portions:
> a first portion which contains functions for use in both of said different complexities of simulation; and
> ***a second portion comprising two alternative versions:***
> ***a first version for use in one of said different levels of complexities of simulation when selected for closer inspection of the process being simulated; and***
> ***a second version for use in the other of said different levels of complexities of simulation, wherein the second version is for use in the less complex level of the simulations, and is arranged to approximate the functionality of the first version.***

(Emphasis added).

Applicants respectfully submit that independent claim 10 is allowable for at least the reason that *Perlin* does not disclose, teach, or suggest at least "a second portion comprising two alternative versions: a first version for use in one of said different levels of complexities of simulation when selected for closer inspection of the process being simulated; and a second version for use in the other of said different levels of complexities of simulation, wherein the second version is for use in the less complex level of the simulations, and is arranged to approximate the functionality of the first version," as emphasized above.

Rather, *Perlin* describes a system for the creation of real-time, behavior-based animated actors. The system includes two subsystems: an Animated Engine and a Behavior Engine. In the system, "All communication between participant processes is done by continually sending and receiving programs around the network. . . . In an exemplary embodiment, each actor maintains a complete copy of the blackboard information for all actors. If an actor's behavior state changes between the beginning and end of a time step, the changes are routed to all other actors. . . . In an exemplary embodiment, the Behavior Engine and the Animation Engine for an actor can be split across a WAN. The Behavior and Animation Engines can communicate with each other through the blackboard. For the DOFs produced by the Animation Engine, the

blackboard is allowed to contain different values at each LAN. For the states produced by the Behavior Engine, the actor maintains a single global blackboard." Col. 15, lines 34-67.

"Computationally, the Behavior Engine for each actor runs at only a single LAN, whereas the Animation Engine runs at each LAN. When two characters must physically coordinate with each other, they use the local versions of their DOFs. In this way, an actor is always in a single Behavioral State everywhere on the WAN, even though at each LAN he might appear to be in a slightly different position. In a sense, the actor has one mind, but multiple bodies." Col. 16, lines 1-8.

Accordingly, *Perlin* describes that actions of an actor on different LANs may not be completely in sync with one another, since each LAN has its own Animation Engine performing the actions. The Animation Engines are all at the same level of complexity in *Perlin* and are not used based on complexities of simulation. As such, *Perlin* does not disclose different levels of complexities of simulation where a second portion of a model uses a first version for use in one level of complexity of simulation and a second version for use in another level of complexity of simulation. Rather, *Perlin* discloses that implementation of the same action by two different Animation Engines may not be performed exactly the same, although they are at the same complexity level.

As a result, *Perlin* fails to teach or suggest "a second portion comprising two alternative versions: a first version for use in one of said different levels of complexities of simulation when selected for closer inspection of the process being simulated; and a second version for use in the other of said different levels of complexities of simulation, wherein the second version is for use in the less complex level of the simulations, and is arranged to approximate the functionality of the first version," as recited in claim 10.

For at least these reasons, *Perlin* does not teach or suggest all of the features of claim 10, and the rejection of claim 10 should be withdrawn.

e. Claims 11 and 13

Because independent claim 10 is allowable over the cited art of record, dependent claims 11 and 13 (which depend from independent claim 10) are allowable as a matter of law for at least the reason that dependent claims 11 and 13 contain all the features of independent claim 10. For at least this reason, the rejections of claims 11 and 13 should be withdrawn.

f. Claim 14

As provided in independent claim 14, Applicants claim:

> A simulator device arranged to simulate a creature in two different levels of complexities of simulation, the device being arranged to utilise a model of the creature that comprises at least two portions:
>
> a first portion which contains functions used in both of said different levels of complexities of simulation; and
>
> ***a second portion comprising two alternative versions, a first version used in one of said different levels of complexities of simulation when selected for closer inspection of the process being simulated, and second version used in the other of said different levels of complexities of simulation, wherein the second version is for use in the less complex of the simulations, and is arranged to approximate the functionality of the first version.***

(Emphasis added).

Applicants respectfully submit that independent claim 14 is allowable for at least the reason that *Perlin* does not disclose, teach, or suggest at least a "a second portion comprising two alternative versions, a first version used in one of said different levels of complexities of simulation when selected for closer inspection of the process being simulated, and second version used in the other of said different levels of complexities of simulation, wherein the second version is for use in the less complex of the simulations, and is arranged to approximate the functionality of the first version," as emphasized above.

Rather, *Perlin* describes a system for the creation of real-time, behavior-based animated actors. The system includes two subsystems: an Animated Engine and a Behavior Engine. In the system, "All communication between participant processes is done by continually sending and receiving programs around the network. . . . In an

exemplary embodiment, each actor maintains a complete copy of the blackboard information for all actors. If an actor's behavior state changes between the beginning and end of a time step, the changes are routed to all other actors. . . . In an exemplary embodiment, the Behavior Engine and the Animation Engine for an actor can be split across a WAN. The Behavior and Animation Engines can communicate with each other through the blackboard. For the DOFs produced by the Animation Engine, the blackboard is allowed to contain different values at each LAN. For the states produced by the Behavior Engine, the actor maintains a single global blackboard." Col. 15, lines 34-67.

"Computationally, the Behavior Engine for each actor runs at only a single LAN, whereas the Animation Engine runs at each LAN. When two characters must physically coordinate with each other, they use the local versions of their DOFs. In this way, an actor is always in a single Behavioral State everywhere on the WAN, even though at each LAN he might appear to be in a slightly different position. In a sense, the actor has one mind, but multiple bodies." Col. 16, lines 1-8.

Accordingly, *Perlin* describes that actions of an actor on different LANs may not be completely in sync with one another, since each LAN has its own Animation Engine performing the actions. The Animation Engines are all at the same level of complexity in *Perlin* and are not used based on complexities of simulation. As such, *Perlin* does not disclose different levels of complexities of simulation where a second portion of a model uses a first version for use in one level of complexity of simulation and a second version for use in another level of complexity of simulation. Rather, *Perlin* discloses that implementation of the same action by two different Animation Engines may not be performed exactly the same, although they are at the same complexity level.

As a result, *Perlin* fails to teach or suggest "a second portion comprising two alternative versions, a first version used in one of said different levels of complexities of simulation when selected for closer inspection of the process being simulated, and second version used in the other of said different levels of complexities of simulation, wherein the second version is for use in the less complex of the simulations, and is arranged to approximate the functionality of the first version," as recited in claim 14.

For at least these reasons, *Perlin* does not teach or suggest all of the features of claim 14, and the rejection of claim 14 should be withdrawn.

CONCLUSION

For at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,

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